



Enhanced Public Access to NIH Research Information:

A response from Elsevier

November 15, 2004

Elsevier recognizes that through the initiatives of the National Institute of Health (NIH) to more broadly disseminate the published output of its Science Technical and Medical (STM) research, NIH will play an increasingly important role within the global STM publishing sector. Elsevier fully supports the NIH's goals of improved dissemination and enhanced access to NIH research for both specialized and general audiences, and offers to collaborate with the NIH to achieve these objectives.

Elsevier is a major player in the publishing landscape, and has been so for well over a century. Elsevier's mission is to continue to develop the growth, quality and efficiency of peer review publication and enhance access to published research materials. We invest heavily to do so, spending several hundred million dollars every year to collate, review, edit, correct, produce, disseminate and maintain archives of some 250,000 high quality articles in 1,800 trusted, specialized, peer-reviewed journals. Since 1995 we have also invested some \$400 million in electronic distribution and digitization programs that are dramatically increasing the effectiveness and efficiency of researchers and practitioners.

By working together, we seek to avert some serious risks that we foresee with the current draft NIH proposal, risks that we believe would detract from both NIH's and Elsevier's objectives and—albeit unintentionally—adversely affect medical and scientific authors and readers, and all the publishers that serve them. We outline the pitfalls to be avoided in more detail below. Through such cooperation we are sure that we can achieve these shared goals while maintaining other essential benefits of today's system, which has developed to optimize the quality, breadth, depth, functionality, and efficiency of published research.

We believe that the key to a successful NIH access program is the modification of critical elements of the proposal such as the timing of public access, relation between distribution vehicles (e.g. PubMed Central (PMC), publishers' platforms), and document format (e.g., author's version, publisher's version). Furthermore we see Elsevier-assisted marketing opportunities to extend the promotion of NIH-funded research e.g., creating links to additional relevant materials, adding NIH logos to published articles, and driving usage of NIH funded material through specialist search and browse agents (e.g. our SCIRUS search engine) and INFORM.

Concerning the details of the NIH access program, *Elsevier urges the NIH not to make any requests of authors within the first year after publication.* Any request of authors in that time period could potentially cause disruption to a number of current

dynamics of a broad number of published journals, particularly many niche titles with relatively few subscribers. Many journals, however, will still continue to find ways to make NIH-funded articles available as soon as possible to increase their visibility, but in ways that are viable for their unique profiles. *We would recommend that NIH request the author to deposit the manuscript on PMC 15-18 months after publication as a guideline that could be applied across a broad range of articles without significant risk of negative effects.*

We also strongly urge the NIH to confirm, as it currently proposes, that the final posted manuscript be defined as the author's version resulting after all modifications due to the peer review process. There is significant added value in the peer review process and we agree that the NIH posting should take benefit from it while retaining coherence between the version posted on PMC and the finally published version of all research papers. We therefore also recommend that the manuscript in the PMC archive should contain a working link to the authoritative publisher's copy contained in the publisher's electronic database. We are assuming and recommending that NIH seek authors to post extended abstracts of work-in-progress at an earlier stage. Finally we would like to explore fully how we could help enhance NIH's plans, for example via marketing.

As background to our proposal to NIH, we include a brief overview of the current dynamics of STM publishing and identify where we think real amendments are required to the NIH access program.

STM publishing - a finely balanced, high quality system that works well, and whose rapid transformation is delivering ever wider access at increasingly lower costs:

STM publishing is an integrated self-sustaining system in which some 2,000 STM publishers worldwide—including large commercial, small commercial, university presses and learned societies—co-exist in a network that annually produces around 1.2 million peer-reviewed articles in some 16,000 journals. NIH estimates that it funds 60,000-65,000 of these articles (5%), of which Elsevier publishes about 15,000.

Publishers play an essential role in establishing journals, managing quality via the peer review and selection process, copy-editing and preparing submitted manuscripts for production, and developing electronic platforms that enable online browsing, search and linkage functionality. Publishers also distribute print and online versions of journals to global readers, manage authors' rights and protect the copyright of published research. In short, publishers make the difference between no published output and authoritative published output. They provide a critical service by creating authoritative, respected journals that are accessible worldwide, and are the pre-eminent format by which scientific and medical research findings are disseminated.

The STM publishing system works well for authors whose research findings benefit from the peer review process, in which world-class experts comment on and, in the case of accepted papers, validate the importance of new findings, which are then disseminated to scientists, medical practitioners, and the public around the world. Healthy publishing competition provides authors with multiple journals in which to publish and ensures that journals constantly innovate to attract top quality manuscripts. Publishers increasingly allow authors to post their final article versions, as accepted by the journal, on their own personal or their institution's website.

Readers benefit from access to a broad choice of quality branded journals containing high quality, validated peer review articles. We estimate that over 90% of scientific and medical researchers globally have access to the STM journals that they need. Most researchers also say that access has become significantly easier over the last 5 years through electronic distribution platforms such as Elsevier's *Science Direct* which now holds over six million articles and is available to over 17 million users worldwide, an increase of 79% since 2001 alone. The number of articles downloaded by users has grown from 53 million in 2001 to a projected 280 million in 2004. Research shows that scientists read 44% more articles per year than 25 years ago, and that they read from almost twice as many journals. Functionality (and hence efficiency) has also dramatically improved for readers, who can now perform complex searches of journals, immediately retrieve full text articles and print them on the spot, link instantly to other cited articles, export text to other databases and programs, receive e-mail alerts when new journal issues are released, etc.

Public access to STM journals and high quality validated research articles is very good, particularly in the US where the public has immediate, free access to current STM journals via the open door policy of most state university libraries. Also, 97% of U.S. citizens are served by a public library whose inter-library loan programs provide access to current STM articles. The same is true in many other countries: the UK government recently noted that it "is happy that public libraries and the interlibrary loan system are able to satisfy public demand for scientific journals...[and] applauds the British Library which can provide copies of documents 'within two hours'!"

More recently, publishers are collaborating to enhance the general public's access to and understanding of science and medical research. *INFORM*, cross-publisher initiative, makes useful and relevant medical articles free to the public via patient organizations and groups like the American Cancer Society. HINARI, a WHO-based initiative, provides online access to the major journals of the biomedical, clinical medical and related fields, without charge, to public institutions in developing countries. The UN's AGORA program does the same for agricultural journals in developing countries.

Libraries, despite continuing budget pressures, are also seeing greater value for money with these changes through significantly broadened electronic access. The number of academic institutions with electronic journals is growing rapidly. In the U.S., as usage has grown with e-access, the price paid by a library per Elsevier article retrieved has dropped 58% from \$13.05 in 2001 to \$5.54 in 2004 and projecting out will soon drop below \$3.

In summary, it is important to recognize the major contributions that STM publishers make to medical and scientific communities. Publishers need to recoup the significant investments that they make to deliver them. STM publishing works well, and there is a balance to maintain in considering changes to the system, particularly as it is in a rapid state of transition from print to electronic and with accelerating access and rapid cost reduction.

Pitfalls to avoid in adding to the STM Publishing arena

The NIH proposal, if correctly positioned, will add to the positive dynamics of STM publishing. However, if its current formulation is not modified it risks compromising, albeit unintentionally, the system's ability to continue meeting its constituents' multiple demands for access, quality, integrity, depth, breadth, functionality and value-for-money.

Research shows that across all fields of science the majority of an article's lifetime usage happens in an extended period *after* it has been published. If a significant proportion of specialized journals' articles result from NIH-funded research, budget-strapped libraries may be tempted to cancel titles if they know their readers can still access many of the articles contained within them after a relatively short period. Niche publications in specialized fields with small local reader bases and concomitant higher prices are especially at risk.

The result would be less choice for authors who will have fewer journals in which to publish and a reduction in the system's overall quality and capacity. The possible reduction in number of peer-reviewed journals cannot be good for authors, research readers, the general public, or the NIH.

If learned societies' journals' revenues are reduced, so too will be their ability to fund meetings and conventions, scholarships and grants, lecture series, advocacy for research and health policy, and the provision of health information to the public via print and electronic materials. It is likely that a reduction in journal revenues would endanger the continuation of certain societies and smaller publishers. This will further reduce the breadth and quality of STM published output.

Finally, some journals could well choose to cease reviewing and accepting articles that in their views have unsustainable terms attached, i.e. the potential demand for articles whose research is funded by the NIH to be freely accessible in an unviable time. Publishers may also be forced to charge authors up-front, which would transfer costs currently distributed among global subscribers to mostly U.S.-based authors and those that fund them. A shift towards author-pays publishing is an issue that has received much recent press coverage and there remain significant concerns in author, reader, library, government and teaching circles over the implications of the author-pays publishing model.

In conclusion, we see STM publishing as a system that has developed over many years and is core to the continuing success of the research community. We are keen to sustain quality and balance in its continuing evolution. We wish to work collaboratively with all key players, particularly the NIH, to demonstrate leadership in optimizing this evolution, to address the issues we raise and to develop viable solutions that will benefit everyone.